Daily Log #10

Date: 13 February 2002, Lesson length: 45 minutes

What did you expect students to learn during the lesson? There was not much time to learn today, but I wanted students to reflect on their learning by taking the Worm Quiz. They also had an opportunity to reflect on their learning by writing persuasive letters to the Student Council. This was my final evaluation about how much students learned about earthworms and wermi-composting. This concluded my essential question for this unit: Knowing structure and function, what are the earthworm's needs and adaptations for their environment? Why are earthworms important? How can earthworms be used to address the problem of excess food waste in society?

Describe the instructional strategies, learning activities and resources used by you and your students during the lesson. I had students clear their table and have nothing out but a pencil or pen. I passed out the quiz, and reminded students that they had 35 minutes to complete the quiz.

Describe how you monitored students' understanding of the lesson's main concepts and what you found. When I corrected the quizes, I found that students could apply their knowledge from this unit by the way the questions were answered. They also seemed very passionate about their letters to the Student Council. Most students included all of the necessary information in their letters encouraging the Student Council to consider vermi-composting for the school.

Describe how you accommodated student' learning needs during the lesson, and how you plan to adjust your teaching for the next lesson, if necessary, based on the students' learning today. All of the students took the quiz. I gave some of the students with disabilities and the ESL student a word bank to use to answer some of the questions. I made sure that they also had additional time to complete the quiz if they needed it.

Only a few of the students had difficulty writing the letter. This involved format concerns, not content. A few left out a conclusion in their letter. Most of the students wrote letters and have a lot of interest in sending the letters to the Student Council. Although it was not my original plan to forward the letter, I will accommodate the students' interests and send the letters to the Student Council for an official response.

Name: Student #3 Date: 2/13/02 Period: 9

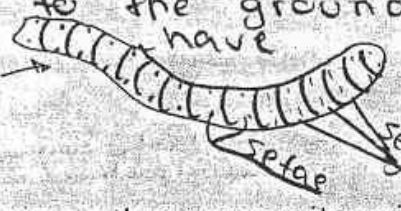
nt #3

45.5/50 91%

Earthworm Quiz

1. Draw and explain how an earthworm is adapted to moving underground. 4 points

An earthworm is adapted to moving underground because it has setae that are like bristles that stick to the ground to help them move. Also they have line segments that help them scrunch and stretch to move far.



Nice illustration!

2. Compare how an earthworm senses its environment with how you sense your environment. 10 points (-1)

We have the same 5 senses as worms, hear, see, taste, smell, and feel. But, we have ears, eyes, tounges, noses, and skin to use all of the senses. Worms only have one of these, a mouth for taste. But they could also sense light or dark for seeing, have cells on top of their heads for smelling. hearing, and have skin along their body for feeling.

how?

vibrations

3. Would you recommend earthworms for a garden? Compare how a garden would be with and without earthworms. 9 points

Yes, I would highly recommend earthworms for a garden. This is because with worms, they produce castings that have very good nutrients to make a healthy garden. Also, they eat dead plants and animal matter so they aren't left in the soil. Lastly, they make air tunnels as they move through the dirt, this will make room for roots on a plant to grow. Without worms none of this would happen and you would have dead things all over your garden no room for roots to grow, and no healthy

102

Student #3

4. Do you think vermicomposting is important? Why is it used? 9 points (-2)

vermicomposting is an important thing to do. This is because you could have great, healthy soil for your garden full of nutrients for plants to grow. Also, this produces less garbage waste and no more dumps so there is more room for more important things. Vermicomposting is used because to reduce the garbage, for great soil to make a great garden, and also to sell to others for a great garden and great foods/plants.

What will you do with the garbage worms can't eat? What waste can you use for vermicomposting? why? -2

5. How would you create a worm bin? Explain why each component is important. 15 points (-1.5)

To create a worm bin you would first take two bins to put the worms and other materials in. Then you would put one aside and punch holes in the top of the lid and the bottom of the bins. This is to let the worms breathe and have fresh air and to drain out water. Then you would shred peices of newspaper because they have to be small for them to move and dip them in water because they like dampness. Then you would ring out the news paper peices and put them in the bin with holes. After you fill the bin to the top with damp newspaper peices you would dump a couple cups of sand in the bin so it could get into the worm and into the gizzard to grind up foods. Lastly you would put your red wiggler worms in

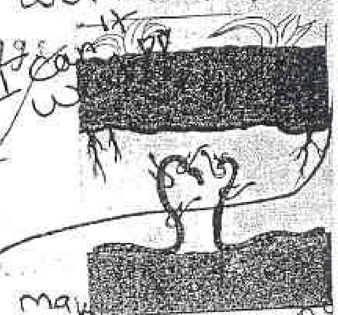
(*) because they like damp not only wet

6. Assess why some worms in the class worm bin are lacking their clitellum. Predict what is going to happen to the population of worms in the bin. 3 points

Some worms are lacking a clitellum because that means that they just recently shed theirs and it is off now with eggs in it. This means that the worms population is going to increase because the eggs in the sacks will probably hatch. I w...

Like what? .5

and then your old foods (not plastics or cardboards), and your worm bin is finished! But, you have to make ... have to ... because ... worms ... Then ... sure ... 103



Wondering about Worms

Student #1

Welcome to the wonderful world of earthworms! Before we start, I would like to know what you know about earthworms and what you would like to know about earthworms. Below, write your responses.

1|31|02

I know that worms....	I want to know... (Who? What? Where? Why? When? How?)
• They clean the soil • Have a segmented body • They have an anus and a head • They have 1 brain and 2 nerves • Feel cold and moist • Heterotrophs • Inverterbrates • Eat dead plant and animal matter • Can regenerate Good memory!	• What do they give the soil? • How do they reproduce? • How long do they live? • Do they build a colony like home? • How do they digest their food? • Do they sleep? • Can they live in cold place • Do they have eyes? • What is the Knot or bigger section? Thoughtful Questions!! Together we will be answering many of the with this unit. If we don't answer them all feel free to research this topic on your own for extra credit, share your information with the class!

Wonderful Worm Observations

2/11

1. Curls and uncurls body to move
2. They feel gooey
3. They look moist
4. Can stretch out body really long
5. Fat at one end and thin at another
6. Move head up in air to go in that direction
7. Back end seems to curl up when moving
8. Head is white
9. Head pops in and out
10. Have a black ring near anus
11. Tan and kind of pinkish color
12. Have white rings - where?
13. Tan spot on underbelly
14. Move one spot and not the whole body
15. Two ends can move in two different directions

Nice Observations !! Good Details!

Interesting!

Worm Questions

While you are observing the worms, record any questions you have about the worms.

16. How can it retract its body?
17. How good can it see?
18.
19.
20.

Can you think of any other questions? Ask your partner!

110

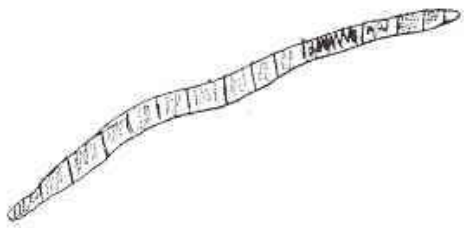
2/1/02

Worm Observation Lab

Next time, please use pencil.

Worm Portrait

(Draw a detailed picture of your worm)



Where's the mouth?

INVESTIGATE:

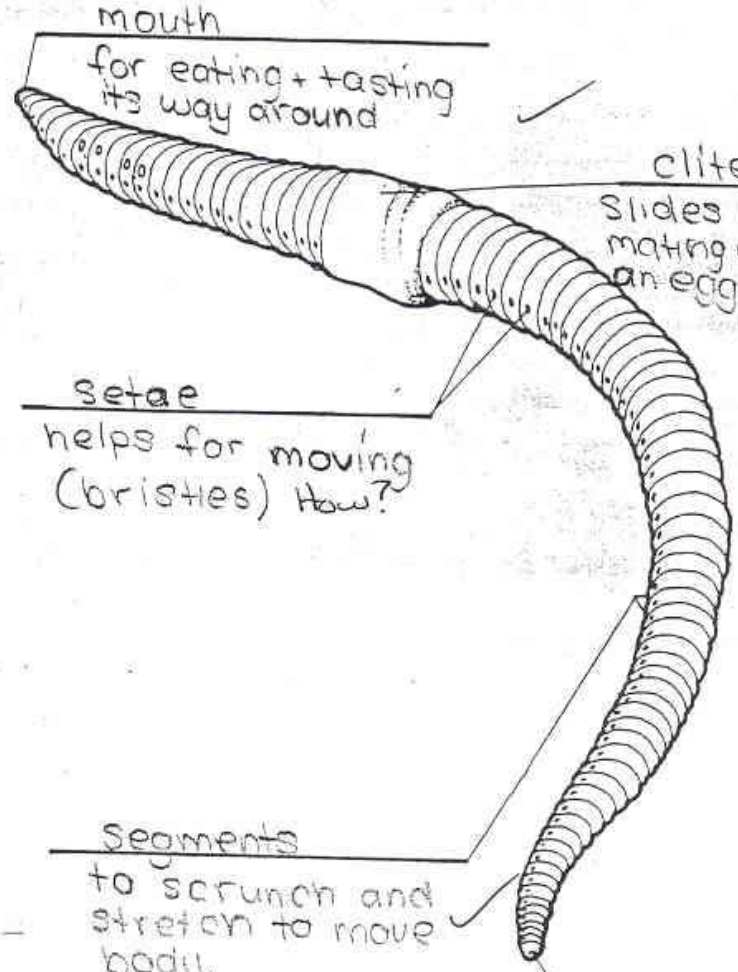
1. Can you tell which is the front end of a worm and which is its tail? Is there a difference? How can you tell?
   Yes, there is a difference and I can tell because the head has a white spot and the tail is darker. What was the other way discussed in class?
2. How do worms move? Explain in detail. Do they ever move backwards?
   They seem to wriggle or curl their bodies in order to move. Yes they can and do move backwards. What are they doing with their segments?
3. What happens when a worm meets another worm?
   The worms curled together to keep their slime skin sticky. ← Why is this important?
4. Can you find and do you think the worm has:
   a. Ears? No Why? Because it does move when I yell
   b. Eyes? No Why? Because it doesn't react when I come close
   c. Mouth? Yes Why? So it can eat and it poops ← not through to it. Its mouth
   d. Nose? No Why? Because it does not smell ← How do you know?
5. How is the worm like you?
   The worm is like me by it moves around alot We both have ~~eyes~~ and a mouth. Can you think of anything else? You just wrote that worms don't have eyes!
6. How is the worm different from you?
   The worm is different because it lives in the ground and is slimy. Can you think of anything else?

The Earthworm Student #1

Name Student #1

2/4/02

Label the exterior parts of the earthworm.



mouth
for eating + tasting its way around

clitellum
Slides off after mating and becomes an egg sack

Setae
helps for moving (bristles) How?

Segments
to scrunch and stretch to move body.

anus
after digesting, casting come out of anus.

WORD BANK

~~mouth~~ ~~clitellum~~ ~~setae~~
~~segment~~ ~~anus~~

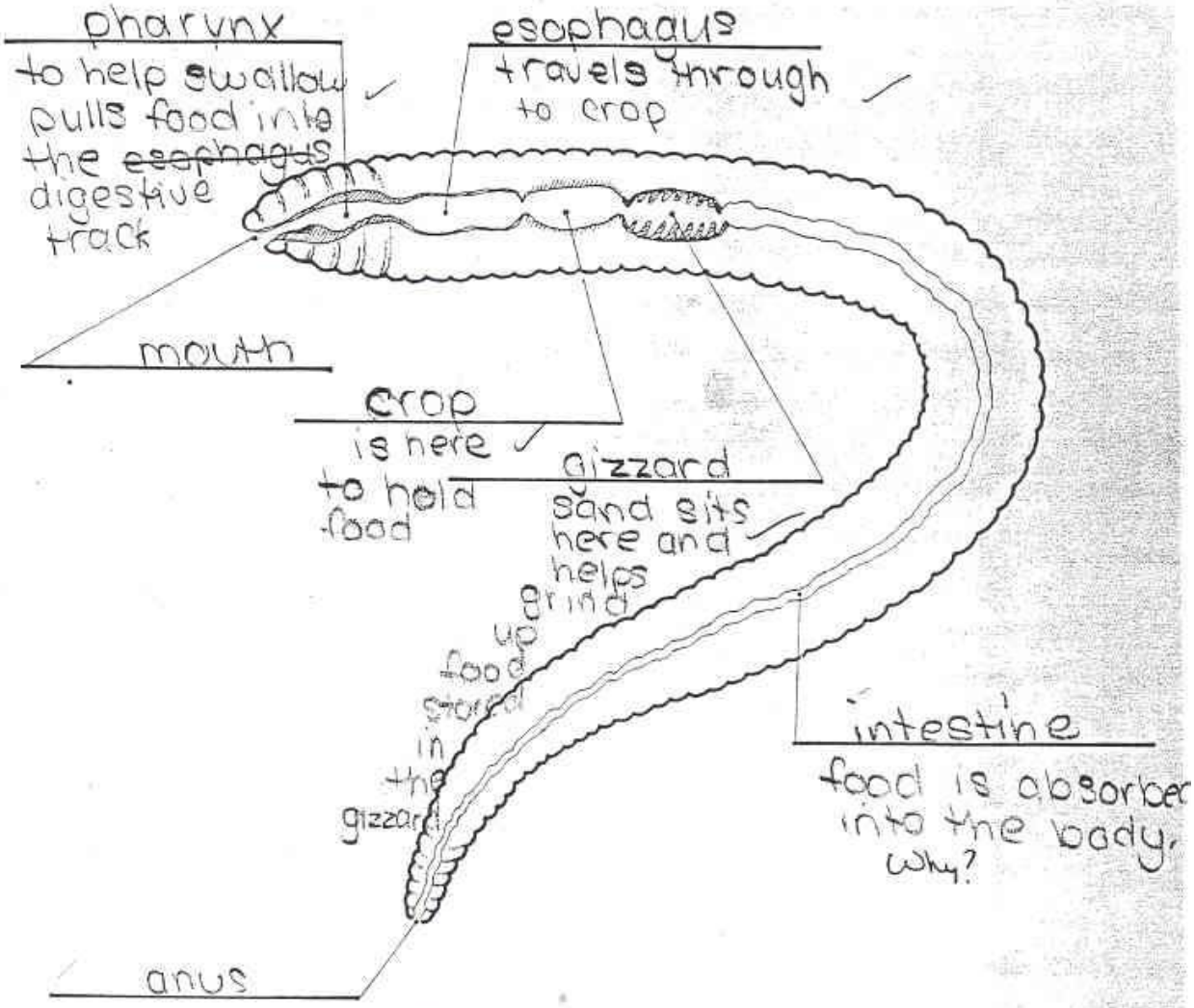
The Earthworm – Digestive System

Name Student #1

2/4/02

For the earthworm, as with most animals, digestion takes place in a long tube with openings at both ends. This tube is divided into organs that do different jobs.

Label the parts of the earthworm's digestive system.



WORD BANK

~~crop~~ ~~intestine~~ ~~esophagus~~
~~mouth~~ ~~gizzard~~ ~~anus~~
~~pharynx~~